

CLAIMS

Sub A17 1. A polyphase receiver in which quadrature related low IF signals are soft limited prior to being demodulated.

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2. A polyphase receiver comprising means for receiving a wanted data signal modulated on a carrier signal and for producing quadrature related low IF signals, soft limiting means for compressing the dynamic range of the quadrature related low IF signals and signal demodulation means for recovering the data signal.

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3. A polyphase receiver comprising means for receiving a wanted data signal modulated on a carrier signal and for producing quadrature related low IF signals, image rejection filtering means for filtering the quadrature related low IF signals, soft limiting means for compressing the dynamic range of the filtered quadrature related low IF signals and signal demodulation means for recovering the data signal.

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4. A polyphase receiver as claimed in claim 3, characterised in that the image rejection filtering means comprises polyphase filtering means.

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5. A polyphase receiver as claimed in any one of claims 2 to 4, characterised in that amplifying means are coupled to inputs of the image rejection filtering means for adjusting the dynamic range of the quadrature related low IF signals for entry into the image rejection filtering means.

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Sub A17 6. A polyphase receiver as claimed in any one of claims 2 to 5, characterised by harmonic filtering means coupled between outputs of the soft limiting means and inputs of the signal demodulation means.

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7. A polyphase receiver as claimed in any one of claims 2 to 6, characterised in that the signal demodulation means comprises a polyphase discriminator and a data filter.

5 8. A polyphase receiver as claimed in any one of claims 2 to 7, characterised in that the soft limiting means have a characteristic which is substantially linear at signal levels 10dB below a predetermined minimum wanted signal level, moves into compression for higher signal levels and hard limits at substantially 10 dB above the desired receiver sensitivity.

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9. An integrated receiver comprising those parts of the polyphase receiver as claimed in any one of claims 1 to 8 which are integratable.

10. An integrated transceiver comprising a polyphase receiver as
15 claimed in any one of claims 1 to 8 and a transmitter.

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